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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/729,040	12/04/2000	Larry W. Hinderks	10872US04	5026

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EXAMINER
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HSU, ALPUS

ART UNIT	PAPER NUMBER
2665	

DATE MAILED: 04/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/729,040

Applicant(s)

HINDERKS ET AL.

Examiner

Alpus H. Hsu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 21 February 2001.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 26-61 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 26-61 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date Z.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

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1. The information disclosure statements filed 8/2/01, 1/7/02, 1/25/02 & 1/20/03 have been placed in the application file, but the information referred to therein have not been considered in view of the information disclosure statements filed 3/20/03, which includes all references cited in the above IDSs.

2. Claims 30, 31, 33-37, 42, 43, 48 and 49 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In each of claims 30, 31, 36 and 37, line 1, and each of claims 42, 43, 48 and 49, line 3, the recitation of "as step" should be changed to --a step-- for correcting the typographical error.

In each of claims 33 and 34, line 1, "claim 7" should be changed to --claim 32-- for proper claim dependency since claim 7 has been canceled in the preliminary amendment.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

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invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 26, 27, 30, 32, 33, 36, 38, 39, 42, 44, 45, 48, 50, 51, 54, 56, 57 and 60 are rejected under 35 U.S.C. 103(a) as being unpatentable over SIE et al. in U.S. Patent No. 5,534,941 in view of MORIYAMA et al. in U.S. Patent No. 5,537,409.

Referring to claims 26 and 38, SIE et al. discloses a method for multiplexing a digital video channel (501-1) with a plurality of digital audio channels (502-1 to 502-n) (col. 8, lines 3-29), whereby the video channel may be demultiplexed with each digital audio channel (col. 8, line 65 to col. 9, line 16) as claimed, but differs from claim in that it does not teach a specific time division multiplexing scheme, providing a time division multiplexed digital data stream comprising a repeating pattern of digital data slots, with each repetitive pattern having at least a first slot in fixed position for a portion of video channel digital data and a second and a third slots in fixed positions for a first and a second audio channel digital data, providing each audio channel digital data in synchronization with the portion of video channel digital data. However, the time division multiplexing and synchronization schemes for video and audio signals are well known in the art and commonly applied in communications field. MORIYAMA et al., for example, from the similar field of endeavor, discloses a synchronization system for time divided video and audio signals, providing a time division multiplexing scheme that produces a time division multiplexed digital data stream comprising a repeating pattern of digital data slots, with each repetitive pattern having at least a first slot in fixed position for a portion of video channel digital data and a second and a third slots in fixed positions for a first and a second audio channel digital data, providing each audio channel digital data in synchronization with the portion of

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video channel digital data (col. 1, lines 9-12, 40-57; col. 4, lines 6-13, col. 5, lines 55-62, col. 8, lines 33-53). One skilled in the art would have recognized the advantage of utilizing time division multiplexing and synchronization schemes for digital video and audio signals to provide multi-media data transmission. Therefore, it would have been obvious to a person with ordinary skill in the art at the time of the invention to incorporate time division multiplexing and synchronization schemes of MORIYAMA et al. into the method of SIE et al. to achieve the advantage of accomplishing synchronous reproduction of MPEG type signals for the purpose of improving the reliability and efficiency for digital broadcasting.

Referring to claims 27 and 39, SIE et al. differs from claim in that it does not teach each digital data slot having the same data length which is well known in the art. MORIYAMA et al., also discloses the feature of providing each digital data slot having the same data length (col. 5, lines 18-34). Therefore, it would have been obvious to a person with ordinary skill in the art at the time of the invention to incorporate the feature of fixed length digital data slots into the method of SIE et al. to achieve the advantage of fixed length data transmission for the ease of data transmission control purpose.

Referring to claims 30 and 42, SIE et al. discloses the multiplexing of mapping information with the video and audio channel digital data (col. 4, lines 6-14, col. 8, lines 36-55), but differs from claim in that it does not teach at least a fourth slot in fixed positions for the insertion of mapping information in the repetitive pattern of the TDM digital data stream. MORIYAMA, from the similar field of endeavor, also discloses the insertion of mapping information in fixed position of repetitive pattern of TDM digital data stream (col. 4, lines 6-13). Therefore, it would also have been obvious to a person with ordinary skill in the art at the time of

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the invention to incorporate the insertion of mapping information in fixed position of repetitive pattern of TDM digital data stream of MORIYAMA et al. into the method of SIE et al. to achieve the advantage of accomplishing synchronous reproduction of MPEG type signals for the purpose of improving the synchronization control for digital broadcasting.

Referring to claims 32, 44, 50 and 56, SIE et al. discloses a method for demultiplexing a multiplexed data stream, by receiving the multiplexed digital data stream (col. 8, line 65 to col. 9, line 5) and recovering a portion of video channel data (V) and a plurality of audio channel data (A-1 to A-n) (col. 9, lines 5-10) as claimed in claims 32, 44 and 50, and further reassembling the recovered video channel data and audio channel data into one output (col. 9, lines 10-16) as in claim 56. But SIE et al. differs from the claims in that it does not teach a specific time division multiplexing scheme for providing a time division multiplexed digital data stream to be demultiplexed, which comprises a repeating pattern of digital data slots, with each repetitive pattern having at least a first slot in fixed position for a portion of video channel digital data and a second and a third slots in fixed positions for a first and a second audio channel digital data, providing each audio channel digital data in synchronization with the portion of video channel digital data. However, the time division multiplexing and synchronization schemes for video and audio signals are well known in the art and commonly applied in communications field. MORIYAMA et al., for example, from the similar field of endeavor, discloses a synchronization system for time divided video and audio signals, providing a time division multiplexing scheme that produces a time division multiplexed digital data stream comprising a repeating pattern of digital data slots, with each repetitive pattern having at least a first slot in fixed position for a portion of video channel digital data and a second and a third slots in fixed positions for a first

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and a second audio channel digital data, providing each audio channel digital data in synchronization with the portion of video channel digital data (col. 1, lines 9-12, 40-57, col. 4, lines 6-13, col. 5, lines 55-62, col. 8, lines 33-53). One skilled in the art would have recognized the advantage of utilizing time division multiplexing and synchronization schemes for digital video and audio signals to provide multi-media data transmission. Therefore, it would have been obvious to a person with ordinary skill in the art at the time of the invention to incorporate time division multiplexing and synchronization schemes of MORIYAMA et al. into the demultiplexing method of SIE et al. to achieve the advantage of accomplishing synchronous reproduction of MPEG type signals for the purpose of improving the reliability and efficiency for digital broadcasting.

Referring to claims 33, 45, 51 and 57, SIE et al. differs from claim in that it does not teach each digital data slot having the same data length which is well known in the art. MORIYAMA et al., also discloses the feature of providing each digital data slot having the same data length (col. 5, lines 18-34). Therefore, it would have been obvious to a person with ordinary skill in the art at the time of the invention to incorporate the feature of fixed length digital data slots into the demultiplexing method of SIE et al. to achieve the advantage of fixed length data transmission for the ease of data transmission control purpose.

Referring to claims 36, 48, 54 and 60, SIE et al. discloses the multiplexing of mapping information with the video and audio channel digital data (col. 4, lines 6-14, col. 8, lines 36-55), but differs from claim in that it does not teach at least a fourth slot in fixed positions for the insertion of mapping information in the repetitive pattern of the TDM digital data stream. MORIYAMA et al., from the similar field of endeavor, also discloses the insertion of mapping

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information in fixed position of repetitive pattern of TDM digital data stream (col. 4, lines 6-13).

Therefore, it would also have been obvious to a person with ordinary skill in the art at the time of the invention to incorporate the insertion of mapping information in fixed position of repetitive pattern of TDM digital data stream of MORIYAMA et al. into the demultiplexing method of SIE et al. to achieve the advantage of accomplishing synchronous reproduction of MPEG type signals for the purpose of improving the synchronization control for digital broadcasting.

6. Claims 28, 29, 31, 34, 35, 37, 40, 41, 43, 46, 47, 49, 52, 53, 55, 58, 59 and 61 are rejected under 35 U.S.C. 103(a) as being unpatentable over SIE et al. in U.S. Patent No. 5,534,941 in view of MORIYAMA et al. in U.S. Patent No. 5,537,409 as applied to claims 26, 27, 32, 33, 38, 39, 44, 45, 50, 51, 56 and 57 above, and further in view of WUNDERLICH et al. in U.S. Patent No. 5,631,693.

Referring to claims 28, 29, 34, 35, 40, 41, 46, 47, 52, 53, 58 and 59, the multiplexing/demultiplexing method provided from the teaching of SIE et al. in view of MORIYAMA et al. discloses the television system with stereo sound and dual language capability (col. 6, lines 29-32 in SIE et al.), but differs from the claims in that it does not teach the two audio channel data to be multiplexed/demultiplexed comprise a first and a second languages. However, the selection of different languages in different audio channels to be multiplexed with video channel is well known in the art and commonly applied in communications field. WUNDERLICH et al., for example, from the similar field of endeavor, discloses the selection of different languages in different audio channels to be multiplexed with video channel (col. 4, lines 17-29). Therefore, it would have been obvious to a person with ordinary skill in the art at the time of the invention to incorporate the multiplexing of video data



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and audio data with different language selection of WUNDERLICH et al. into the multiplexing/demultiplexing method provided from the teaching of SIE et al. in view of MORIYAMA et al. to achieve the advantage of providing different language selection capability for the purpose of providing demand services of different language selection by the customers/subscribers.

Referring to claims 31, 37, 43, 49, 55 and 61, the multiplexing/demultiplexing method provided from the teaching of SIE et al. in view of MORIYAMA et al. and further in view of WUNDERLICH et al. also discloses the insertion of mapping information in fixed position of repetitive pattern of TDM digital data stream (col. 4, lines 6-14, col. 8, lines 36-55 in SIE et al. and col. 4, lines 6-13 in MORIYAMA et al.) to achieve the advantage of accomplishing synchronous reproduction of MPEG type signals for the purpose of improving the synchronization control for digital broadcasting.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Takezawa et al., Yanagimachi et al., Fishman et al., Radice, Dangi et al., Rabowsky et al. and Haigh are all cited to show the common feature of video and audio multiplex transmission system utilizing encoder, multiplexer, modulator, demodulator, demultiplexer and decoder similar to the claimed invention.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alpous H. Hsu whose telephone number is (703)305-4377. The examiner can normally be reached on M-F (5:30-3:00) First Friday Off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy D. Vu can be reached on (703)308-6602. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AHH



Alpus H. Hsu  
Primary Examiner  
Art Unit 2665